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VIRTUAL STATE ENGINEERING AND ITS IMPLICATIONS.(U)

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Abstract (Concluded)

Extension of the theory onto even a simplified hyperspace model indicates direct applications in certain specialized amplifiers. Consideration of multiple simultaneous observation (Everett's interpretation of quantum mechanics) ties together virtual and observable states into the same time change, allowing superposition of virtual state into observable state. By considering virtual state patterns to be carried by the individual photon, then superposition effects can be obtained upon a target radiated by a radar beam if each and every photon of the radar beam contains one virtual state pattern in common, added into its other (incoherent) virtual state patterns. Sufficient superposition of the coherent pattern in the target produces real observable changes which may have significant applications. Such applications include electron current dissolution (dudding of electromagnetic circuits), cancellation of electromagnetic fields, de-activation (dudding) of nuclear warheads by transmutation of fissionable materials, and simple production of particle beams of enormuous power density. Electron current dissolution is also effective against the nervous systems of biological targets. It thus appears that electromagnetic radiators such as radars could possibly be made into universal, all-purpose weapons effective against every major battle element. A mechanism and a theory for direct amplification of the virtual state into observable state is given. At least one known device, Moray's free energy apparatus, successfully applied virtual state engineering to produce 55 kilowatts of power from a 55-pound device by tapping zero-point energy.

VIRTUAL STATE ENGINEERING AND ITS IMPLICATIONS

T.E. Bearden

ABSTRACT

Experimental evidence of zero-point energy of vacuum has been established beyond question. Soviet direct measurement of this energy has been reported. Prigogine's Nobel Prize work confirms that in theory a highly disordered, chaotic, virtual state, zero-point energy can be cohered to crosstalk into observable quantum change and even macroscopic energy production. Several simple devices can be demonstrated to observably tap zero-point energy. Extension of the theory onto even a simplified hyperspace model indicates direct applications in certain specialized amplifiers. Consideration of multiple simultaneous observation (Everett's interpretation of quantum mechanics) ties together virtual and observable states into the same time change, allowing superposition of virtual state into observable state. By considering virtual state patterns to be carried by the individual photon, then superposition effects can be obtained upon a target radiated by a radar beam if each and every photon of the radar beam contains one virtual state pattern in common, added into its other (incoherent) virtual state patterns. Sufficient superposition of the coherent pattern in the target produces real observable changes which may have significant applications. Such applications include electron current dissolution (dudding of electromagnetic circuits), cancellation of electromagnetic fields, de-activation (dudding) of nuclear warheads by transmutation of fissionable materials, and simple production of particle beams of enormous power·density. Electron current dissolution is also effective against the nervous systems of biological targets. It thus appears that electromagnetic radiators such as radars could possibly be made into universal, all-purpose weapons effective against every major battle element.

VIRTUAL STATE ENGINEERING AND ITS IMPLICATIONS

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1.0 BACKGROUND

Certain recent theoretical advances in quantum mechanics suggest the possibility of direct engineering applications. Several of these new extensions to theory drastically change the present view of physics and of physical effects obtainable from microscopic phenomena and macroscopic phenomena and macroscopic systems. To explain the importance of these new developments, some background discussion is necessary.

1.1 EVERETT'S THEORY OF THE UNIVERSAL WAVE FUNCTION

In 1957, working under the renowned John Wheeler at Princeton University, Everett[1] formulated a totally new interpretation of quantum mechanics and corrected the present interpretation of physics for a severe shortcoming: the limitation to only a single observer/detector at a time. The new theory of the universal wave function that emerged for multiple simultaneous observation was startlingly unique, but totally consistent with the entire experimental basis of physics[2]. The new model represented so unorthodox a change in conceptualization that only a handful of U.S. physicists have examined the theory, and almost the entire Free World output on the subject is contained in a single Princeton University publication.[3] Nonetheless, since the principles of quantum mechanics underlie the whole of physics[4] and physics underlies engineering, Everett's fundamental work presages the engineering of novel and practical new systems presently not being pursued in the Free World. But because of its extreme theoretical strangeness--which, compared to the accepted Bohr interpretation, is as fundamental a change as was Einstein's relativity compared to Newtonian physics--Everett's work has not been universally accepted even for further investigation.[5] That such an investigation might be fruitful can be appreciated by noting that the multitude of 3-spaces, in the hyperspace that results in Everett's theory, all crosstalk.This is tantamount to stating that ordinary 3-space conservation of energy--which rigorously applies only to a closed 3-space system--can be and is surmounted in the time coherent crosstalk, since energy in the 3-space frames orthogonal to the laboratory frame (which orthogonal energy may be referred to as <u>anenergy</u>) uncloses or "opens" the laboratory frame by the amount of crosstalk translated to and from it.

Further, the random crosstalk normally occurs at so high a frequency (e.g., at wavelengths near the Planck length, or on the order of 10^{-35} meters) and in such short and incoherent bursts that it appears in the virtual state with respect to the laboratory observer. Thus, this energy is not normally detected, although it can be physically demonstrated to be present in enormous densities in vacuum. Anenergy, however, in its own hyperspace framework is essentially infinite energy and it may be taken as one way to model zero-point energy of vacuum.

Thus a ready model of nested orthogonal virtual state anenergies is immediately available to represent both Wheeler's superspace[6] and zero-point energy of vacuum, in a manner consistent with Everett's fundamental interpretation of quantum mechanics.

1.2 HYPERSPACE ASPECTS

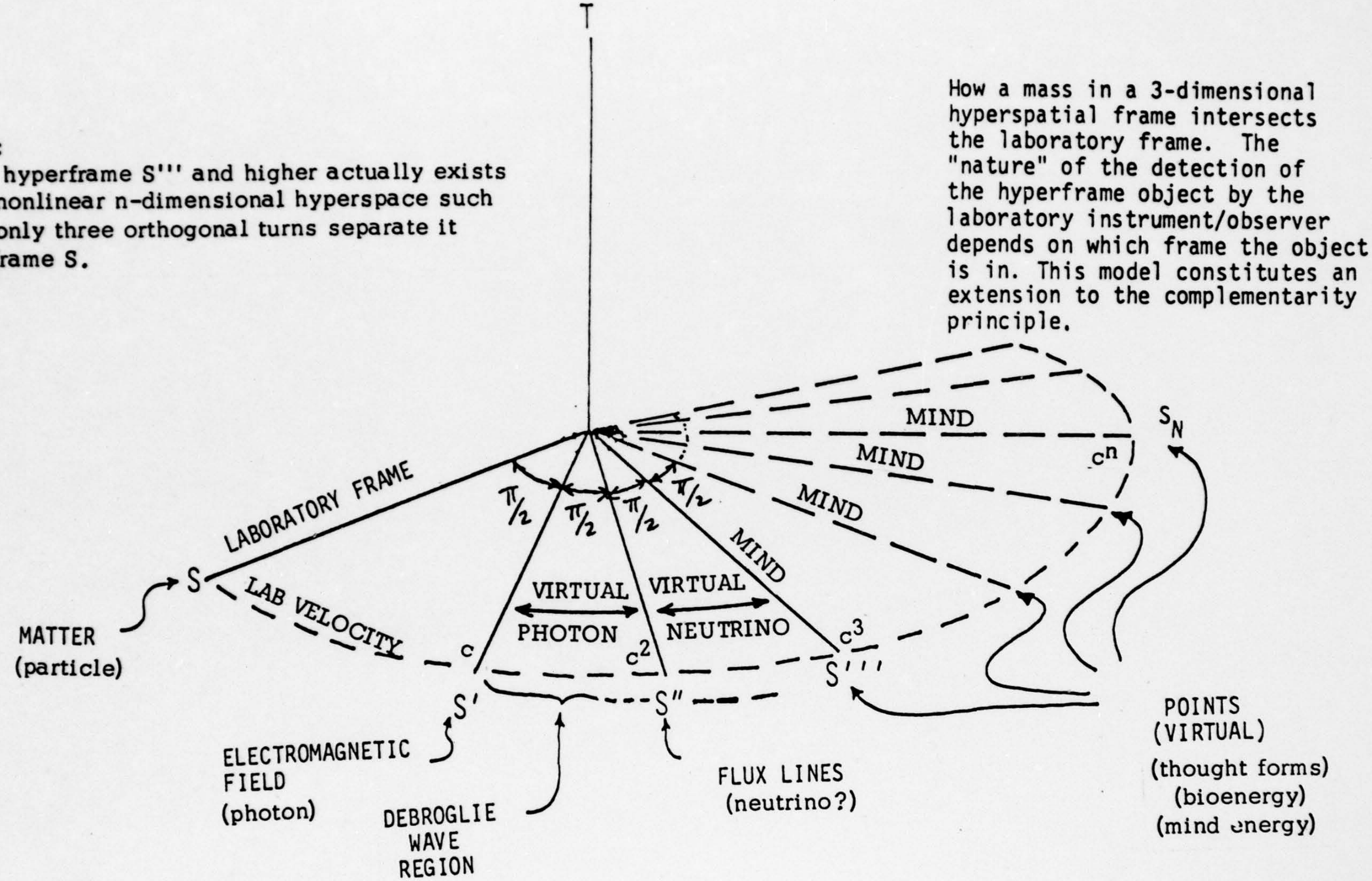
A simplified model of one hyperspace in which calculations are particularly direct is shown in Figure 1.1. Since Everett's model is consistent with experiment[7], and the model in Figure 1.1 is a subset of Everett's theory, then this nested virtual-state anenergy model is also consistent with the experimental basis of physics. Note, however, that the model offers a mechanism by means of which electromagnetic energy in the laboratory frame can be created and destroyed, and gives physical substance to the creation and annihilation operators presently used in quantum mechanics.

In the model, the time axis (time dimension in four-space) is shared simultaneously by an infinite set of orthogonal 3-spaces. An object's intersection in a specific 3-space determines how it is detected or observed by an instrument or observer in that frame. Accordingly, in this model an "object" has more than one kind of "reality" it evidences; spatially a 3-dimensional physical object in the S frame is a 2-dimensional wave or photon in the S' frame, a one-dimensional line in the S'' frame, and a zero-dimensional point in S''' and higher hyperframes. Vice versa, spatially a 3-dimensional object in a higher frame is a quite different object to an S-frame laboratory observer. An electron serves as a good example: when in the S' frame, it is seen in the S frame as a photon; when in the S" frame it is seen by the S-frame observer as a flux line; when in the S''' frame, it is simply a point in the S frame. The major

Figure 1.1. Hyperframes

Note:
Each hyperframe S''' and higher actually exists in a nonlinear n-dimensional hyperspace such that only three orthogonal turns separate it and frame S.

How a mass in a 3-dimensional hyperspatial frame intersects the laboratory frame. The "nature" of the detection of the hyperframe object by the laboratory instrument/observer depends on which frame the object is in. This model constitutes an extension to the complementarity principle.



point is that, by sufficient time coherent collection of "points" in the S-frame, one can collect and produce photons and even particles by "lifting" them from the higher hyperframes that constitute nested virtual frames to the S-frame observer. Several fundamental experiments and concepts in physics are already merely specialized cases; lifting a real electron from the Dirac sea of negative energy electrons is one example in solid state physics, while the most universal examples are simply photon absorption and emission whereby, to the S-frame observer, 2-dimensional wave energy and 3-dimensional corpuscular mass may be turned one into the other. Further, any fundamental mass particle is actually a dynamic hyperspatial entity and not just a static corpuscle; a fraction of its time the S-frame particle spends in higher dimensional spaces. As is well known, e.g., a free electron is a wave for a fraction of time given by the fine structure constant

$$\alpha \simeq \frac{1}{137} \qquad (1)$$

Thus materialization and dematerialization (creation and annihilation) of particles by conventional modes may be modeled in the hyperspace model shown in Figure 1.1. In addition, new modes are opened up whereby instead of photons being produced, a dematerializing particle may radiate flux lines, neutrinos, or simply dimensionless points--in sharp contrast to conventional modes such as pair annihilation, in which photon radiation accompanies the process.

1.3 AN EXAMPLE

One statement of the Heisenberg uncertainty principle is:

$$\Delta E \Delta t \geq \frac{\hbar}{2}, \text{ where } \hbar = \frac{h}{2\pi} \qquad (2)$$

As written, this principle is fundamental to the basis of quantum physics and engineering and applies for monocular (one-at-a-time) detection. If one now applies the principle to simultaneous coherent detection (as prescribed by Everett's theory) of superposed quantum and virtual (subquantum) changes, one has[8]

$$\Delta E \Delta t = n \frac{\hbar}{2}, \; n = 0, 1, 2, 3, \cdots \qquad (3)$$

which becomes a generatrix for quantized change itself in the S-frame. Stated in reverse, any observable quantized change in the S-frame may now be regarded as an ensemble of unobservable, hyperdimensional, virtual S-frame changes (where these are observable changes in their own hyper-frames), just as a single vector may be regarded as the ensemble of its projections onto orthogonal coordinate axes.

To show a simplified example of the feasibility of direct engineering with this effect, one rewrites equation (2) for a change in electromagnetic energy as:

$$h\nu\Delta t = n\frac{\hbar}{2}, \quad n = 1, 2, 3, \cdots \tag{4}$$

Relativistically converting equation (4) to wavelength considerations by means of $\Delta T \equiv \frac{\Delta L}{C}$, and factoring out h,

$$4\pi\nu\frac{\Delta L}{C} = n, \quad n = 1, 2, 3, \cdots \tag{5}$$

Treating ΔL as the classical radius of a fundamental particle, and letting $4\pi r^2 = S$ where S is the classical surface area,

$$\nu = \frac{cnr}{S}, \quad n = 1, 2, 3, \cdots \tag{6}$$

As an initial approximation (which is sufficient due to the uncertainty in the specific radius to be assumed), let $C \simeq 3 \times 10^8 \frac{m}{s}$, and $r = 10^{-15}m$ (the Fermi length). We then have:

$$\nu = n \quad \frac{30}{4\pi} \cdot \quad 10^{22} \quad, n = 1, 2, 3, \cdots \tag{7}$$

and

$$\nu = n \left[2.3873 \text{ X } 10^{22}\right] \text{ hz}, \quad n = 1, 2, 3 \cdots \tag{8}$$

As can be seen, the theory predicts a series of harmonic oscillator frequencies which may be taken to be the vectorial hyperspatial projection components of the particle itself, i.e., there are certain "window

frequencies" tuned into and through hyperspace by virtue of the geometrical size of the particle. By adding consideration of doppler shifts due to movement of the particle, specific hyperspatial "window frequencies" can be calculated for a given free particle moving at a given velocity. Engineering aspects emerge from the consideration that the particle's window frequencies represent resonant couplings between virtual state and observable state. Thus, theoretically through and from the particle at its window frequencies, and possibly at subharmonics, real observable energy is extractable from cohered, superposed, virtual state zero-point energy of vacuum hyperspace.

1.4 AMPLIFIER THEORY

Calculation of the hyperchannel effect in a multi-staged amplifier can be established as shown in Figure 1.2, which schema may be visualized as similar to a Class F amplifier using state-of-the-art feedforward and feed-back techniques. In the first hyperframe[9] given by v = c, all stages of the amplifier appear superposed due to Lorentz-Fitzgerald contraction. For a particle at a particular location in any stage n the corresponding location in any other stage m will have an exceedingly small but finite probability of having the same energy state, i.e., there is a small but finite and real possibility that the particle exists in both locations simultaneously during a given small increment of time. That probability may be taken to be an identity coefficient between the two locations and regarded as the probability of a wormhole connection in spacetime itself--i.e., as the fraction of time that spacetime is multiply connected in the first hyperframe.* Figure 1.3 shows the setup of the calculation of the gain available by cohering the collection of the hyperspatial component. For stage i of n stages, where E_i = initial input to stage 1,

$$E_{o(i)} = A_o^i E_i + A_o \sum_{j=1}^{n} A_o^j E_i I_k \qquad (9)$$

or

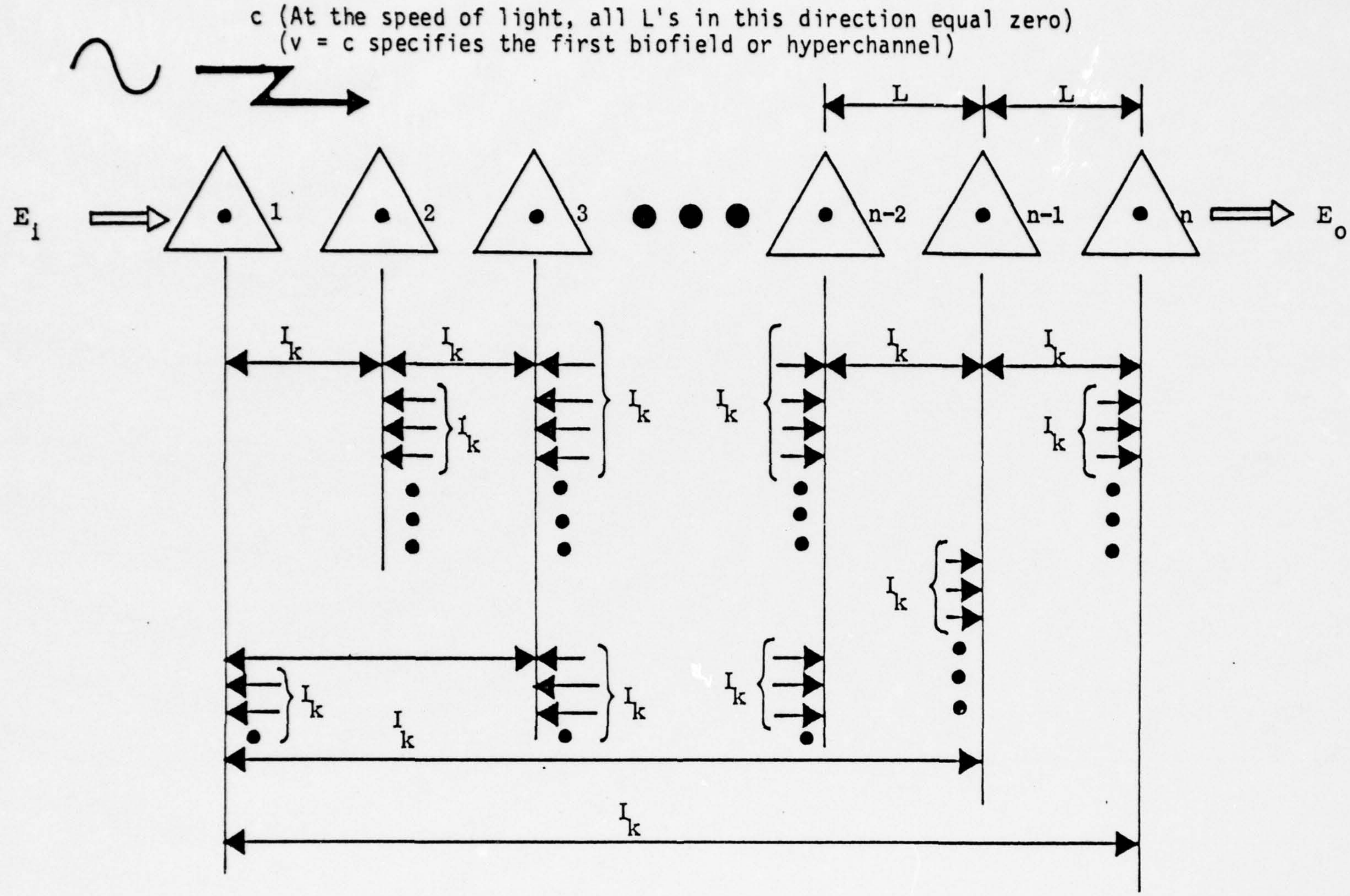
$$E_{o(i)} = A_o^i E_i + A_o E_i I_k (A_o + A_o^2 + \dots + A_o^n) \qquad (10)$$

For stage n:

$$E_o = E_{o(n)} = A_o^n E_i + A_o E_i I_k \left[\frac{1 - A_o^{n+1}}{1 - A_o}\right] \qquad (11)$$

*The identity coefficient determines the "crosstalk" between hyperframes. Certain frequencies (e.g., 38-40 kHz) have large I_k's and thus constitute "magic windows" between hyperframes.

Figure 1.2. Hyperchannel Effect



HYPERCHANNEL EFFECT

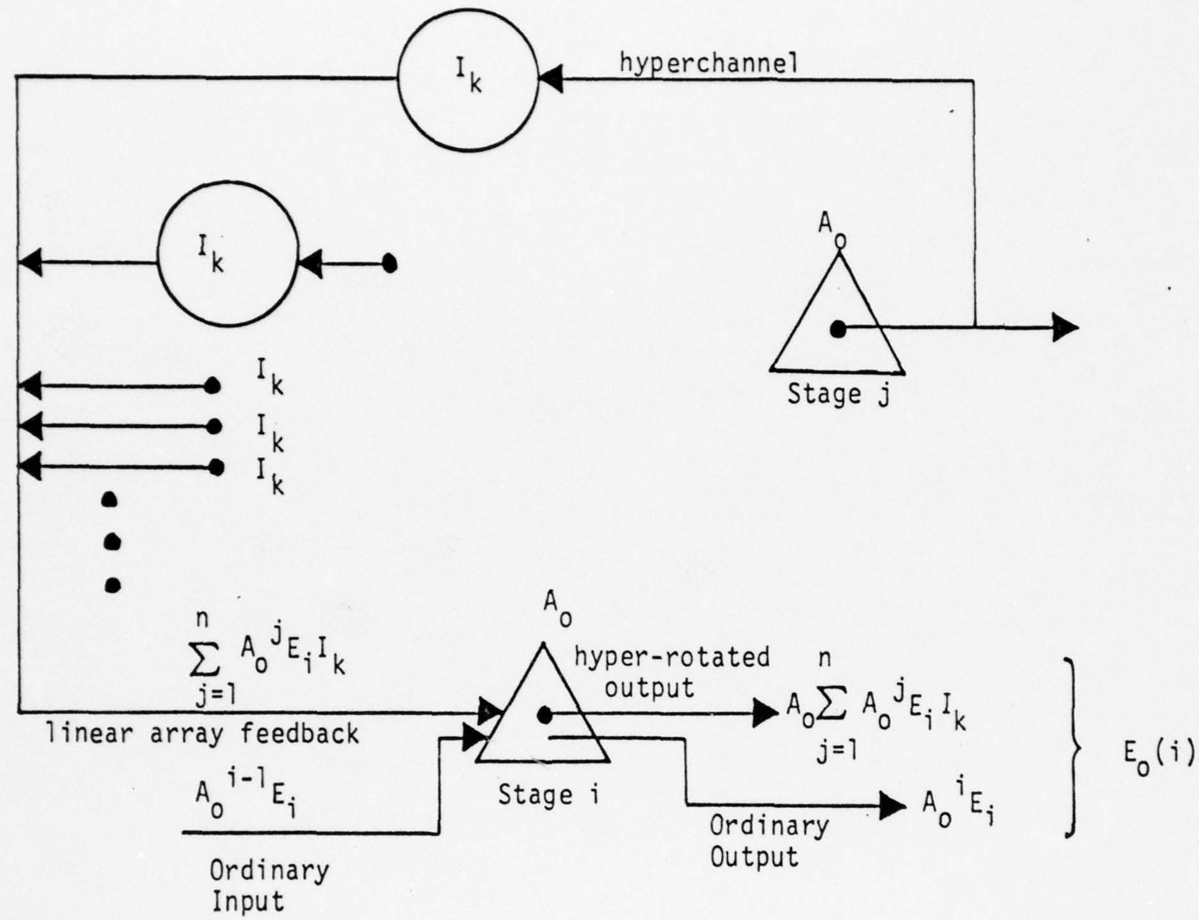


Figure 1.3. Output of Stage i

$$E_o = A_o^n E_i + A_o E_i I_k \left[\frac{A_o^{n+1} - 1}{A_o - 1} \right] \qquad (12)$$

For $n >> 1$, $A_o >> 1$

$$E_o \approx A_o^n E_i + A_o E_i I_k \left[\frac{A_o^{n+1}}{A_o} \right] \qquad (13)$$

$$\frac{E_o}{E_i} = A_o^n + A_o^{n+1} I_k \qquad (14)$$

where A_o^n represents the gain factor in the ordinary 3-space channel by standard theory of inert amplifiers, and $A^{n+1} I_k$ represents the exponential hyperchannel gain factor of the linear array.* In general, it is readily seen that the total gain factor, considering all higher hyperchannels, will be of the form:

$$\frac{E_o}{E_1} = A_o^n + A_o^{n+1} I_k + A_o^{n+2} I_k^2 + \cdots + A_o^{n+r-1} I_k^{r-1} + \cdots \qquad (15)$$

Further, due to the minute size of I_k (e.g., $\leq 10^{-50}$), for normal A_o gains the hyperchannel effect will be completely negligible unless a very large number of stages are used.

At least one device--T. Henry Moray's radiant energy amplifier--was successfully built, demonstrated the effect, was repeatedly tested, and produced kilowatts of power.[10] Due to the lack of any theory at the time to explain its operation, the device was not deemed credible, but was regarded in the same category as the ordinary perpetual motion machine. With the most recent advances in theory--and specifically with Prigogine's 1977 Nobel Prize-winning work -- a good theoretical foundation for the Moray device has now been established.

Because of the rapid, exponential falloff of the input amplitude from hyperchannels above the first, all hyperchannels two orthogonalities and

*The procedure is to block the first (normal energy) term but leave open the second (magic windows) term. Thus one could build, e.g., a direct generator for a particle beam of any desired energy. The same amplifier should also be capable of amplifying thought energy, life energy, psychokinesis, etc.

further away from the laboratory frame may normally be neglected unless an extreme number of stages are used. But 20-100 stages can be sufficient to produce the effect in the first hyperchannel, as can be seen from equation (14). Since the first hyperchannel is electromagnetic field with respect to an S-frame observer, then useful electromagnetic energy in the S-frame is produced by the amplifier, directly from zero-point hyperframe energy of vacuum. Further, because of the exponential function of n that results in the gain factor, the addition of only a few extra stages past the level required for breaching the quantum threshold has the potential of yielding enormous amounts of energy, subject only to practical materials limitations and failures. Further, by coupling the cohered energy to electron emission from a cold cathode material, the amplifier can produce a direct flow of electrons into external loads, rather than emitting electromagnetic radiation.

1.5 ZERO POINT ENERGY OF VACUUM

It is well-known that zero-point energy of electromagnetic field in vacuum is:

$$\omega = \frac{1}{2} \sum_{k\sigma} \hbar \omega_k \simeq \infty \qquad (16)$$

The zero-point energy is essentially infinite because there are essentially an infinite number of field oscillators. For most purposes this infinite energy of the vacuum can be taken as a constant, and thus cancels out by definite integration when any physically meaningful quantity is calculated. For this reason, zero-point energy may usually be ignored in ordinary quantum electrodynamics.

However, the absolute value of zero-point energy is physically significant in general relativity, since it determines the curvature of spacetime. Thus in quantized relativistic systems the energy must be taken into account. (Note that in the hyperspatial amplifier theory of Section 1.4, relativistic effects were invoked by going to the first hyperframe). Calculations of the spatial density of this zero-point vacuum energy (expressed in mass units) typically yield densities on the order of the E/C^2 equivalent of $10^{80} - 10^{120}$ grams/cm^3. Further, it can be positively demonstrated that very simple devices can yield direct "tapping" of zero-point energy,

e.g. take a cubical box of volume $\Omega = L^3$ as shown in Figure 1.4, and then put conducting planes at $X = 0$ and $X = R$ as shown. Let L become infinite but keep R finite. Let W_L be the energy in the box when the conducting plane at $X = R$ is absent. When the conducting plane is present, the energy in the box can be divided into two parts: W_R, the energy between and $X = 0$ and $X = R$; and W_{L-R}, the energy between $X = R$ and $X = L$. Although each of these energies is infinite and divergent, the difference between the energy $W_R + W_{L-R}$ with the conducting plane at $X = R$, and the energy W_{L-R} without this conducting plane, is finite. This finite energy difference ΔW can be shown[11] to be:

$$\Delta W = \frac{\hbar C \pi^2 L^2}{720 R^3} \tag{17}$$

which gives a force per unit area of:

$$F = \frac{-\hbar C \pi^2}{240 R^4} \tag{18}$$

This attractive force between conducting surfaces depends only on the separation R and on the universal constants $\hbar$ and c. The energy in equation 17 also depends directly on the plate area. Neither the force nor the work produced depends on the coupling of the electromagnetic field to matter (of which coupling e is a measure). Thus even very simple devices may actually tap zero-point energy of vacuum.

The fact that the zero-point energy exists and has observable consequences has been established by Casimir.[12] Lifschitz[13] extended the theory to describe the attraction of dielectric bodies and to include finite temperature effects. Two Soviet physicists, Deryagin and Abrikosava,[14] have reported direct experimental measurement of real forces generated by this energy.

Further, the Lamb shift in the hydrogen atom is a well-known phenomenon which rigorously establishes that zero-point vacuum energy can be "tapped" to yield observable energy results. In the Lamb effect a small energy difference between the 2s and $2_{P1/2}$ energy levels of the hydrogen atom is

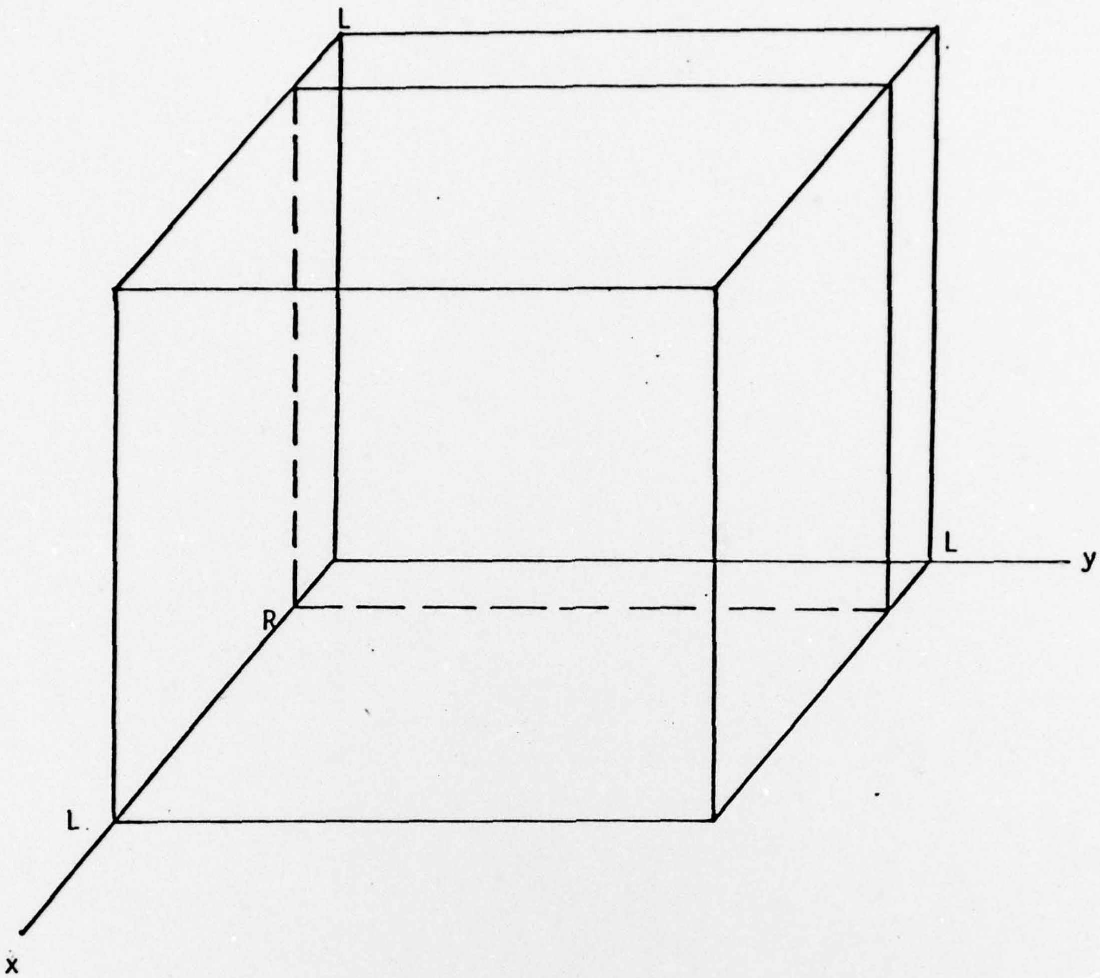


Figure 1.4. Force Exerted Between Two Conducting Metal Plates by Zero-Point Vacuum Energy

created by zero-point energy. The energy has been experimentally measured, yielding a photon frequency of 1057 megahertz.

In fact, a major recasting of quantum mechanics itself appears in the offing as a result of the increasing importance of zero-point vacuum energy, as typified by the work of Boyer.[15]

1.6 CORRECTION OF THE SECOND LAW OF THERMODYNAMICS

In 1977, Dr. Ilya Prigogine was awarded the Nobel Prize for correcting and expanding the second law of thermodynamics to show how certain systems may evolve from randomness toward order.[16,17] This is a fundamental change to the entire statistical basis of physics; specifically, the old second law of thermodynamics applies only to linear systems. For highly nonlinear systems, the former law of entropy need not apply. Specifically, if such a nonlinear system is allowed to vary in an absolutely random fashion, large scale order will start to emerge and stabilize. The more degrees of freedom allowed in the variation, the more stable these emerging orders become. Thus it is now known that from utter chaos there can and will arise large-scale order. Highly nonlinear systems now are known to follow a different kind of entropy law, and often to exhibit negative entropy.

The experimental verification of the new theory has been found in turbulent plasmas, and this verification of Prigogine's work led to the 1977 award of the Nobel Prize to him.

Applied to zero-point virtual energy of vacuum--which is highly nonlinear and turbulent--it is now evident that the new thermodynamics predicts the rise and presence of large, ordered energy structures, even sufficiently large to breach the quantum threshold and result in observable change. Indeed, this very fact may account for the infinite Dirac sea of negative energy electrons and a corresponding neutrino sea. Further, were it not for the practical existence of the new second law and negative entropy in highly nonlinear systems, the ordered macroscopic world itself could not emerge from the chaotic zero-point energy. Space is not emptiness; instead it is a plenum filled with violently fluctuating energies and energetic particles in hyperspatial frames, and in these nonlinear energy fluctuations large scale orders--such as fundamental particles of every possible sort--are continually emerging and submerging (being created and destroyed).

Indeed, a similar chaotic maelstrom of actions and interactions are occurring in vacuum as are occurring at a larger scale level in a glass of water. Thus there now exists a substantial theoretical basis to allow cohering these repetitively appearing, ordered virtual energy structures into stabilized observables. Further, there is evidence that virtual effects can be modulated into electromagnetic carriers and dumped onto macroscopic targets at a distance, diffusing and accumulating the superposing virtual structures throughout the target material and structure. If sufficient superposition of the virtual structures occurs in the target, the quantum threshold is breached and observable change occurs in the target.

1.7 PHOTON CARRIER OF THE VIRTUAL STATE

Bearden[18] has presented a new logic which establishes that a mass particle dimensionally imposes a time-differentiating operation upon 4-dimensional Minkowski spacetime as:

$$\partial/\partial T\ (L^3T) \rightarrow L^3 \qquad (19)$$

The new logic successfully explains the two-slit experiment, fundamental to all quantum mechanics. A fundamental new defining equation for mass has also been given.[19] Since a mass is spatial by virtue of its conception, and the photon ($\Delta E \Delta T$) contains time by definition, a direct model of quantized physical change itself has been proposed by Bearden as shown in Figure 1.5. In this model, it can be seen that virtual entities which exist in time must of necessity be carried by the photon, i.e., "time" may be considered a special sort of box into which everything is simultaneously fitted. Since detection occurs only singularly, by analogy "detection" is simply the lifting of a single thing from the time box by the process of time-differentiation. As can be seen from Figure 1.5, the photon interaction accomplishes this process, and continually connects and disconnects the virtual state to the particles with which interaction occurs. Thus the virtual state pattern on an absorbed photon is diffused throughout the elemental mass of a macroscopic object by succeeding internal interactions, as a function of time of the sort given by:

$$N = N_o e^{-\lambda t} \qquad (20)$$

Photon Interaction Creates Objective and Nonobjective States

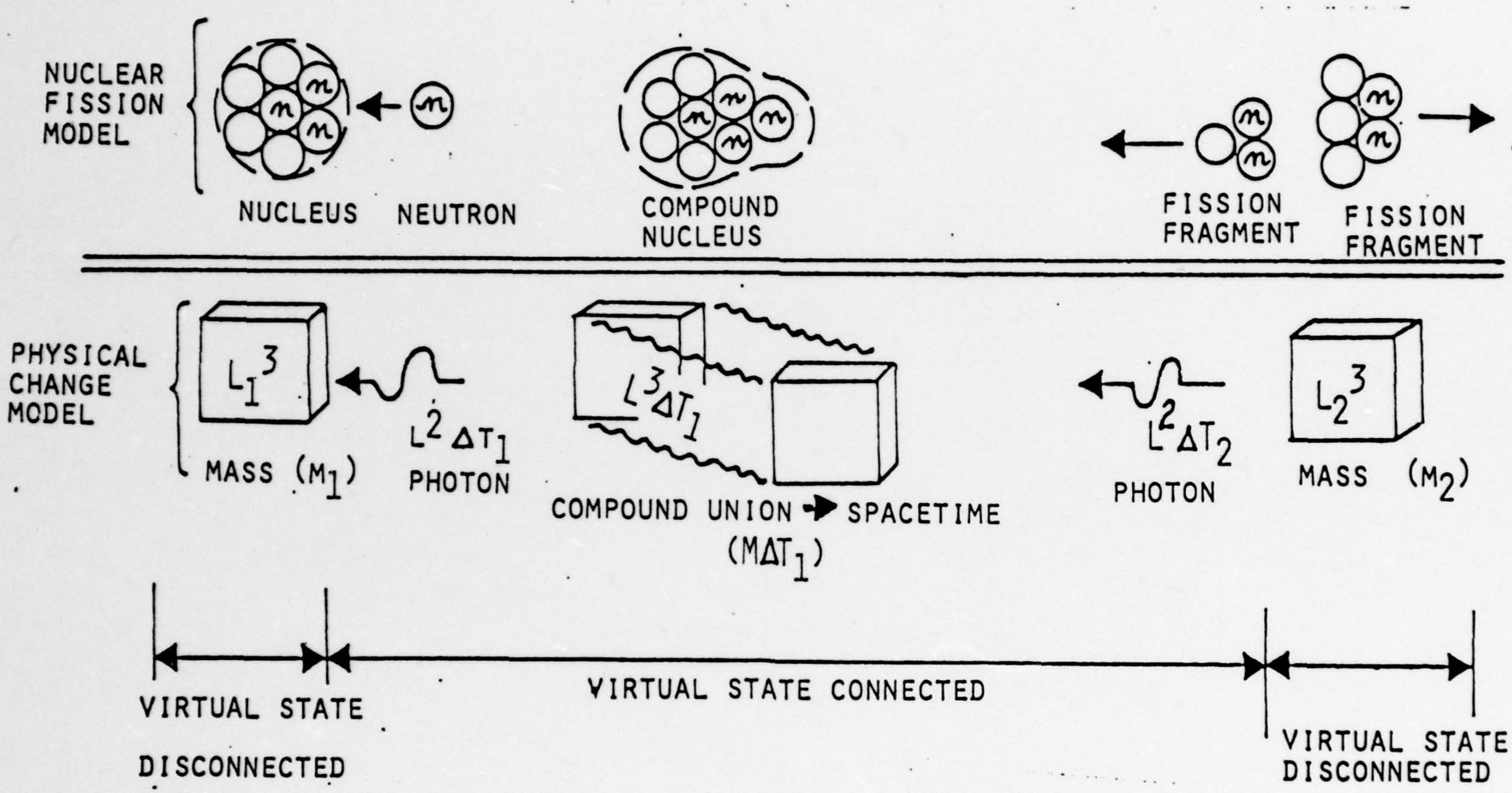


Figure 1.5. Raindrop Model of Quantized Change

where λ is the diffusion constant for the element considered, N_0 is the number of atoms of the element initially in the object's mass, and N is the number of atoms which have not yet interacted with the diffusing virtual pattern at time t.

When an electromagnetic signal is being continually absorbed by a radiated body and each photon absorbed contains an identical virtual pattern in and among its collection of transported incoherent virtual state patterns (which randomly vary from photon to photon), then an accumulation of the repeated coherent virtual pattern occurs by superposition as shown in Figure 1.6. The superposing pattern will diffuse throughout the absorbing mass in accordance with equation (20). The mass is rather like a leaky capacitor now being charged up by the superposing virtual pattern. When the superposition reaches the quantum threshold, real observable change occurs in the absorbing object mass. This process is called kindling, and it is a fundamental process whereby a virtual state pattern may be modulated into an electromagnetic carrier, delivered to a target mass, and superposed into observable change in that mass. The type of observable change which can be kindled would appear to be almost unlimited, being dependent only on the type of virtual pattern modulated into the carrier photons. Specifically, referring to Figure 1.1, the kindling effect passes progressively from the third hyperframe (S-frame points) to the second hyperframe (S-frame flux or force), to the first hyperframe (S-frame electromagnetic field), to the zeroth hyperframe (S-frame particulate matter).

1.8 FUNDAMENTAL UNITY OF ELECTRICAL FIELD AND GRAVITATION

In 1974 Santilli[20] proved that one of the cornerstone assumptions of physics--the assumption that electrical field and gravitational field are mutually exclusive things--is wrong. What is then left is either a strong assumption or a weak assumption: the strong assumption is that electrical field and gravitational field are totally one-and-the-same thing, and the weak assumption is that electrical field and gravitational field are partially the same thing. Since either a gravitational change or an electrical change can be comprised of the quantity action, then the ability to kindle and engineer the virtual state may be expected to yield gravitational effects as well as electromagnetic effects. Virtual state engineering - the engineering of virtual subquantum

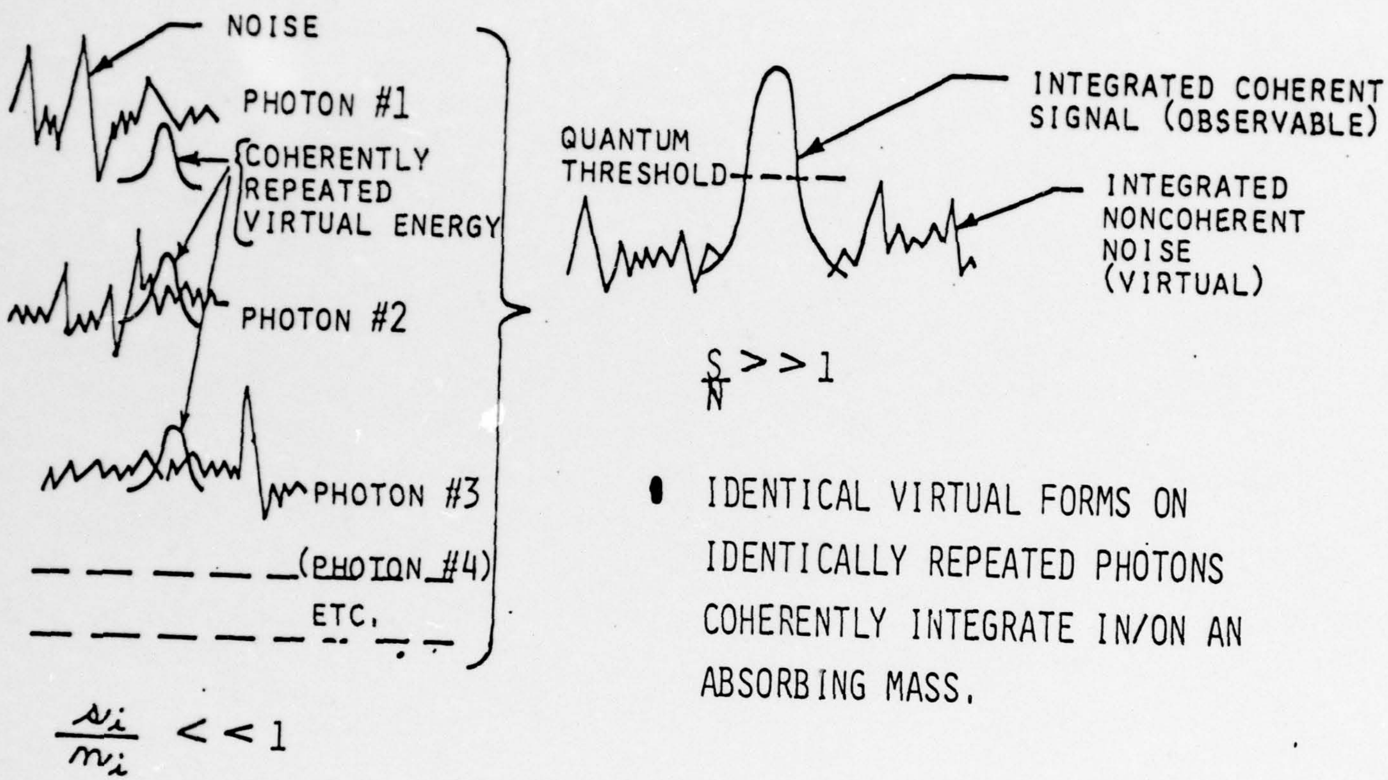


Figure 1.6. Kindling Virtual State Into Objective State

effects into observable quantum change--may well yield a potential for practical antigravity devices and effects.

2.0 SOME POTENTIAL WEAPON EFFECTS

While the path from theory and experimentally verified basic effects to operational systems obviously requires considerable time and effort, the potential for eventual systems can be seen. In fact, there is at least tenuous evidence that the Soviet Union is engaged in developing these types of weapons.

2.1 Cancellation of Electromagnetic Field

By kindling photon frequencies 180^{o} out of phase with an existing radiated field, the existing field could be cancelled. This would have substantial anti-radar and anti-communications applications. While cancelling EM field outside the laboratory with ordinary electromagnetic techniques is presently impractical, on the other hand it may prove to be quite practical by coherently kindling (collecting) virtual state directly into the field to quench it.

2.2 Quenching of Electrical Currents in Electronic Circuits

By kindling the virtual state pattern of a positron, electrons flowing in electromagnetic circuits in the target absorbing the carrier could be quenched and extinguished. Further, this would occur without photon emission, since the electrons will be extinguished at the second hyperframe level (flux or neutrinos). Effectively, a conventional quantum mechanical picture would be that the virtual photons emitted and absorbed by each flowing electron--and which create its electrical field--would be quenched. Since these photons create the charge, the electron loses its charge, being converted thereby into neutrinos which radiate away into deep space, with essentially no further interaction. This effect is useful against biological systems (nerve currents), vehicles, tanks, missile electronics, aircraft electrical systems, nuclear warhead electronics, communications systems, etc. If the effect can be obtained, it could conceivably make a powerful radar beam an all-purpose weapon against every sophisticated battle element.

2.3 Transmutation of Active Nuclear Material Elements

Inside the nucleus of an atom the protons and the neutrons are continually exchanging positive charge back and forth on pions. Thus, the proton is

continually turning into a neutron and vice versa, and a very high, positive, pionic current continually exists in the nucleus. Further, a specific frequency spectrum is involved for this current in each specific element.

By placing a 180^{o} phase-inverted pion current pattern for plutonium and one for U^{235} on each photon of an ABM radar beam, the fissionable material in a warhead, inside an incoming tracked re-entry vehicle, could have its nuclei disrupted and transmuted by the quenching of the positive pion currents binding the nuclei together. This could dud the warhead without any concern for decoys, maneuvering re-entry vehicle, chaff, jamming, availability of interceptor missiles, etc. (In fact, biological systems presently have a limited capability to transmute elements, as established by Louis Kervran.[21,22] In 1977 Kervran was nominated for the Nobel Prize for his pioneering work).

2.4 Production of Intense Particle Beams

In theory, each particular kind of fundamental particle will have its own unique hyperspatial frequency spectrum, in accordance with equation (6). If one corrects this spectrum for the doppler generated by the particle's velocity, then a particular particle of a particular energy has a unique "hyperspace spectrum." By using a bank of hyperspatial single-frequency amplifiers tuned to produce a given doppler spectrum, a beam of the desired type of particles at the desired energy level (velocity) could be directly generated. The intensity/density of the beam can be varied over a normal range by varying the gain (A_0) in ganged fashion. To create far higher orders of intensities, the number of stages--n--can be increased. Thus in theory it would seem possible to produce far more energetic particle beams than can presently be obtained, and to do so with relatively small and inexpensive amplifier devices needing little or no power supplies. The implications to antisatellite and antimissile defense--or even to offensive use in a satellite-to-earth mode--are immediately apparent.

3.0 SUMMARY

Experimental evidence of zero-point energy of vacuum has been established beyond question. Soviet direct measurement of this energy has been reported. Prigogine's Nobel Prize work confirms that in theory a highly disordered, chaotic virtual state zero-point energy can be cohered to crosstalk into observable quantum change and even macroscopic energy

production. Several simple devices can be demonstrated to observably tap zero-point energy. Extension of the theory onto even a simplified hyperspace model indicates direct applications in certain specialized amplifiers. Consideration of multiple simultaneous observation (Everett's interpretation of quantum mechanics) ties together virtual and observable states into the same time change, allowing superposition of virtual state into observable state. By considering virtual state patterns to be carried by the individual photon, then superposition effects can be obtained upon a target radiated by a radar beam if each and every photon of the radar beam contains one virtual state pattern in common, added into its other (incoherent) virtual state patterns. Sufficient superposition of the coherent pattern in the target produces real observable changes which may have significant BMD applications. Such applications include electron current dissolution (dudding of electromagnetic circuits), cancellation of electromagnetic fields, de-activation (dudding) of nuclear warheads by transmutation of fissionable materials, and simple production of particle beams of enormous power·density. Electron current dissolution is also effective against the nervous systems of biological targets. It thus appears that electromagnetic radiators such as radars could possibly be made into universal, all-purpose weapons effective against every major battle element.

NOTES AND REFERENCES

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2. See Robert Krotkov's review of the book, The Many Worlds Interpretation of Quantum Mechanics, in the American Journal of Physics, Vol. 43, No. 1, January 1975.

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4. Bernard d'Espagnat, Conceptual Foundations of Quantum Mechanics, W.A. Benjamin, Inc., 1971, p. 368.

5. Ibid, p. 468.

6. See John Archibald Wheeler, "Strange Matter," in Properties of Matter Under Unusual Conditions, Hans Mark and Sidney Fernback eds., Interscience Publishers, 1969.

7. See Note 2.

8. Thomas E. Bearden, "Restatement of the Heisenberg Uncertainty Principle for the Condition of Superposition," 8 October 1975, Defense Documentation Center.

9. Einstein once pointed out that the linear velocity of an object in the S frame is simply a measure of the rotation of the object in hyperspace away from its S frame velocity vector. See Thomas E. Bearden, "A Postulated Mechanism that leads to Materialization and Dematerialization of Matter and to Antigravity," 8 October 1975, Defense Documentation Center, for interpretation of the Lorentz transformation as a hyperspatial rotation. To the S-frame observer the velocity c, the speed of light in vacuum, represents a full orthogonal rotation in hyperspace.

10. T. Henry Moray in Salt Lake City, Utah in the late 1930's produced 50 kilowatts of power from such a device weighing 55 pounds. Moray's device used 29 stages of highly specialized tubes. Dr. Harvey Fletcher, Director of Research at Bell Laboratories at the time, personally examined the device, disassembled it, checked it against fraud, and observed its operation. Dr. Harvey Fletcher is the father of James Fletcher, former Chief Administrator of NASA and is still alive. See T. Henry Moray, The Sea of Energy, fifth edition, History and Biography by John E. Moray, Foreword by Tom Bearden; Cosray Research Institute, 2505 South 4th East, Salt Lake City, Utah 84115, 1978.

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19. Thomas E. Bearden, "Quiton/Perceptron Physics: A Theory of Existence, Perception, and Physical Phenomena," March 1973, Defense Documentation Center, p. 11.

20. R.M. Santilli, "Partons and Gravitation: Some Puzzling Questions," Annals of Physics, Vol. 83, No. 1, March 1974, pp. 108-157.

21. See Louis Kervran, Biological Transmutations, Binghamton, New York: Swan Publishing Company, 1972. Just as biological systems used electricity and electromagnetic effects long before the existence of modern science, they also appear to have used virtual state amplification into observable state (i.e., kindling) to accomplish limited transmutation of elements.

22. Mind and consciousness, and the interaction of mind and matter, can also be modeled in the schema advanced. The resulting model can be shown to fit a wide variety of parapsychological and paranormal phenomena. See Thomas E. Bearden, The Excalibur Briefing, Strawberry Hill Press, 616 44th Avenue, San Francisco, California, 1979, in publication. A significant prediction of the model is that the past can be changed; Wheeler has shown a family of "delayed choice" experiments which show that, when observation on a system is delayed until after the system's essential interactions have occurred, the outcome of the occurred interactions still depends on the later choice by the observer. Thus in at least one sense the "past" can be changed after the fact. (See Wheeler's discussion in Mathematical Foundations of Quantum Theory, Papers from a meeting, New Orleans, June 1977, A. R. Marlow, Ed., Academic Press, New York, 1978.)